often seen sparrows chase pigeons on the house-tops, particularly when the former have had their nests in the vicinity. One season, about ten years ago, I well remember the annoyance these impudent birds caused to the pigeons, for whenever the latter were let out in the morning to air themselves the sparrows would immediately attack them and continue the harassment without intermission all day long. On one occasion, during the same year, I recollect a very amusing scene between a cock sparrow and a cock tumbler pigeon. The former had just flown on to the house-top with a large piece of bread in his bill, when the pigeon advanced rapidly towards him with the intention of seizing the dainty morsel. The plucky sparrow, however, was in readiness for him, and dropping the bread he made a bold onslaught on his larger feathered relation, pecking vigorously at his rear quarters. The pigeon not expecting an attack from such an insignificant foe, and being utterly unprepared for a "round," did not attempt to use its wings as weapons, as is its custom, but contented itself with cooing, and aiming a few rapid pecks with its beak, and then ignominiously took to flight, leaving a few feathers behind in its hurry. No sooner, however, had it quitted the field than about half a dozen other sparrows, who had been sitting on the chimney-pots in the neighbourhood watching the affray, dashed after it and chased it round and round the house, about half a dozen times, before they considered that it had had sufficient punishment. Such is an example of the annoyance my pigeons were sometimes subjected to by the sparrows. I may add that I have frequently observed sparrows and starlings fighting, and also on one occasion saw a sparrow chase a jackdaw which had evidently been attempting to take the sparrow's eggs or young ones. The records of a few other curious instances of birds fighting which I will briefly extract from my diary may perhaps be interesting. "1880 May. Saw a starling attack and drive away two jackdaws which had gone in quest of its eggs. 1880 June. Saw a cloud of redpolls chase a cuckoo. 1883 June. Witnessed a desperate fight between a flock of jackdaws and a heron, in mid air. 1885 June. Saw a skylark chase a cuckoo and drive it away. 1885 August. Saw a mistletoe thrush chase a sparrow-hawk and drive it away. 1886 July. Witnessed a great battle between a large flock of starlings and a flock of rooks, the former having invaded the feeding-grounds of the latter." W. HARCOURT BATH.

Ladywood, Birmingham, April 25.

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## *THE ROYAL SOCIETY SELECTED CANDIDATES.*

THE following is the list of the fifteen candidates selected by the Council of the Royal Society, at their meeting last Thursday, to be recommended for election into the Society. The ballot will take place on Thursday, June 9, at 4 p.m. We print with the name of each of the candidates the statement of his qualifications.

### JOHN YOUNG BUCHANAN, M.A. (Glasgow),

F.R.S.E., F.C.S. Chemist and Physicist to the *Challenger* Expedition, 1872–76. Invented and improved apparatus and methods for collecting and analysing ocean water. Author of "Report of the Specific Gravity of Ocean Water" (Part 2, vol. i., of "The Voyage of H.M.S. *Challenger*"). Since the return of the *Challenger*, Mr. Buchanan has continued his investigations in the steam-yacht specially fitted up by him for the purpose. The following are the titles of some of the papers contributed by him to scientific Transactions and Journals: "Sur l'acide chloropropionique" (*Comp. Rend.*, lxv., p. 417); "On the Formation and Decomposition of some Chlorinated Acids" (Proc. Roy. Soc. Edin., vii., p. 419); "On the Absorption of Carbonic Acid by Saline Solutions" (Proc. Roy. Soc., xxii., pp. 192 and 483); "On the Specific Gravity of Ocean Water" (Proc. Roy. Soc. Edin , ix., 283); "On the Compressibility of Glass" (Trans. Roy. Soc. Edin., 1880); "On a Solar Calorimeter, and some Observations made with it in Upper Egypt" (Proc. Roy. Soc. Edin., xi., 827).

### J. THEODORE CASH, M.D., C.M.,

Has devoted himself to physiological and pharmacological science, and has made discoveries in these as described in the following works, of which he is the author:—"On the Relationship between the Muscle and its Contraction" (*Journ. Anat. Phys.*, vol. xv.); "Ueber den Antheil des Magens und des Pancreas an der Verdauung des Fettes" (*Arch. für Physiol.*, 1880); "Description of a Double Cardiograph for the Frog's Heart" (*Journ. of Physiol.*, vol. iv.). With Dr. Lauder Brunton:—"Contributions to our Knowledge of the Connexion between Chemical Constitution, Physiological Action and Antagonism" (Phil. Trans., 1884); "Action of Alkaloids on Oxidation" (St. Barth. Hosp. Rept., vol. xviii.); "Influence of Heat and Cold on Muscles poisoned by Veratria" (*Journ. of Physiol.*, vol. iv.); "On the Valvular Action of the Larynx" (*Journ. Anat. Phys.*, vol. xvii.); "On the Effect of Electrical Stimulation of the Frog's Heart, and its Modification by Heat, Cold, and the Action of Drugs" (Proc. Roy. Soc., vol. xxxv.); "Ueber Vorbeugende Gegengifte" (*Centralb. für d. Med. Wiss.*, 1884); and several other papers. With Dr. Yeo:—"The Effects of certain Modifying Influences on the Latent Period of Muscle Contraction" (Proc. Roy. Soc., vol. xxxiii.); "The Variations of Latency in certain Skeletal Muscles" (Proc. Roy. Soc., vol. xxxv.); "On the Relationship between the Active Phases of Contraction and the Latent Period of Skeletal Muscle" (*Journ. of Physiol.*, vol. iv.).

### SIR JAMES NICHOLAS DOUGLASS,

Civil and Mechanical Engineer. Engineer-in-Chief to the Hon. Corporation of Trinity House. Is a Member of the Smeatonian Society of Civil Engineers and a Member of the Council of the Inst. Civ. Eng. Member Inst. Mech. Eng. Has been attached to coast signalling since 1847, and the development of electricity for coast lighting since 1862. Has designed and erected several rock lighthouses on the coasts of this country and abroad; some of these works being of exceptional difficulty, for which he received on two occasions a testimonial from the Hon. Corporation of Trinity House. He designed and erected the new Eddystone Lighthouse. On the completion of this work he received the honour of knighthood. He has very materially improved the optical apparatus, lamps, lanterns, and fog-signal apparatus of lighthouses and light-vessels. Is the author of several papers. For one on "The Wolf Rock Lighthouse," and another on "The Electric Light applied to Lighthouse Illumination" (Proc. Inst. Civ. Eng., vols. xxx. and lvii.), he received the Telford and Watt Gold Medals of the Institution of Civil Engineers.

### PROF. J. A. EWING, B.SC. (Edin.),

Professor of Engineering, University College, Dundee. Author of papers contributed to the Royal Society treating of the Thermo-electric quality of metals; the Electric effect due to twisting Iron and Steel wire when magnetised; and various papers on the Magnetic Qualities of Iron and Steel, all of which have been published (see Proc. Roy. Soc., Nos. 205, 210, 214, 216, 220, and the present volume of the Transactions). Well known for his work in connexion with the observation and recording of Earthquake Phenomena, having contributed numerous papers on this subject to the Seismological Society of Japan; is also joint author with the late Prof. Fleeming Jenkin of several papers communicated to the Royal Society of Edinburgh, and published in the Transactions of that Society. Was for five years in Japan as Professor of Engineering, and has held his present Chair (Dundee) for two and a half years.

### PROF. GEORGE FORBES, M.A.,

F.R.S. Edin., F.R.A.S. Member of the Astronomische Gesellschaft, of the Electro-technical Society of Vienna, and of the Society of Telegraph-Engineers. Associate of the Inst. Civil Engineers. Chevalier of the Legion of Honour. Formerly Professor of Natural Philosophy at Anderson's College, Glasgow. Consulting Engineer (Electrical). Author of the following amongst other papers:—"On the Meteoric Shower of November 14, 1866" (*Phil. Mag.* 1867); "On the Meteor-Shower of August 1867;" "On Astronomical Refraction;" "On certain Connexions between the Molecular Properties of Metals;" "On Irradiation;" "On Thermal Conductivity;" "On an Instrument for Indicating and Measuring the Fire-damp in Mines," &c. (Brit. Assoc. Rep., 1867, 1872, 1873, 1878, &c.); "Note on the Zodiacal Light;" "On the After-glow of Cooling Iron at a Dull Red Heat;" "On Diamagnetic Rotation;" "On Comets;" "On the Theory of the Telephone;" "On an Ultra-Neptunian Planet, &c." (Proc. Roy. Soc. Edin., vols. viii., ix., x.); "On the Velocity of White and Coloured Light" (in conjunction with the late Dr. James Young, F.R.S.—Phil. Trans., 1882). Also author or joint author of the following separate works, published by Macmillan:—I. "The Transit of Venus;" II. "Rendu's Theory of Glaciers."

### William Richard Gowers, M.D. (Lond.),

F.R.C.P. Fellow of University College, London. Physician to University College Hospital, and to the National Hospital for the Paralysed and Epileptic. Distinguished as a Physiologist and Physician. Attached to science and anxious to promote its progress. Contributor of papers on:—"The Automatic Action of the Sphincter Ani" (Proc. Roy. Soc., 1877); "The Decupation of the Optic Nerves" (*Centralb. für d. Med. Wiss.*, 1878); "The Enumeration of Blood-Corpuscles" (*Practitioner*, 1878); "The Estimation of Hæmoglobin" (Trans. Clin. Soc., 1878); "The Nature of the So-called Tendon-reflex Phenomena" (Trans. Roy. Med. Chir. Soc., vol. lxii.); "The Mechanism of the Movements of the Eyelids" (*ibid.*); "A Reflex Mechanism in the Fixation of the Eyeballs" (*Brain*, vol. ii.); "The Relation of the Fifth Nerve to Taste" (*Journ. of Phys.*, 1883); "The Origin of the Sixth Nerve" (*Centralb. für d. Med. Wiss.*, 1878); "Unilateral Lesion of the Spinal Cord" (Trans. Clin. Soc., vol. xi.). Author of treatises:—"Manual and Atlas of Medical Ophthalmoscopy," second edition; "Epilepsy and other Chronic Convulsive Diseases;" "Diagnosis of Diseases of the Spinal Cord," second edition; "Diagnosis of Diseases of the Brain;" "Pseudo-hypertrophic Muscular Paralysis;" "Diseases of the Walls of the Heart;" "Leucocythæmia;" "Hodgkin's Disease;" Reynold's System of Medicine;" "Path. Anat. of Hydrophobia;" "Mode of Development of Spindle Cells," &c., &c.

### Alexander Blackie William Kennedy, M.I.C.E.

Civil Engineer. Professor of Engineering and Mechanical Technology, University College, London. Has rendered considerable services to Engineering Education by the establishment of an Engineering Laboratory at University College, and by his investigations there made into the strength of materials (Journ. Soc. Arts, 1875). The students are there taught systematic experimental work, and the plan first introduced by Prof. Kennedy has been generally followed. Tests were there made on strength and elasticity for the Indian Government, and accounts of other tests are given in the reports on riveted joints for Institution of Mechanical Engineers, and in a paper on mild steel written for Roy. Inst. Brit. Architects. He translated and edited "Theoretische Kinematik." He is the author of numerous papers connected with Engineering, as the "Critical Description of the Steam-Engines, &c.," in the Vienna Exhibition, 1873 *Engineering*, June, December, 1873); "Air-Engines" (*Engineering*, 1875); "Geometrical Solutions of some Statical Problems" (Proc. Lond. Math. Soc., vol. ix.). He has also designed the iron and concrete framework and roof of the new Alhambra Theatre.

### George King, M.B.,

F.L.S. Superintendent of the Royal Botanical Gardens, Calcutta, and of the Government Cinchona Plantations of Darjeeling. Formerly Superintendent of the Botanical Gardens of Saharunpur. Author of "Notes on the Lion of Aboo" (Proc. Asiat. Soc. Beng., 1868); "On the Birds of the Goona District" (Journ. Asiat. Soc. Beng., 1868); "Notes on the Vegetable Products and Farm Foods of Rajpootana and Marwan;" "Observations on the genus *Ficus*, and on the Fertilisation of *F. hispida*;" "A Monograph of Indian Fici" (in course of publication). Eminent as an Indian Botanist and Quinologist, and for the services he has rendered to Botanists and Naturalists in India.

### Sir John Kirk, G.C.M.G., M.D.,

F.L.S. H.M. Agent and Consul-General, Zanzibar. Chief Officer and Naturalist of Dr. Livingstone's Government Expedition to the Zambesi, Nyassa Country (1858–63), during which he made large collections, observations, and drawings of great scientific value. Author of numerous contributions to the Botany, Zoology, and Geography of Eastern Tropical Africa, published in the Journals of the Linnean and Zoological Societies, the *Ibis*, &c. During Sir John Kirk's residence, of nearly twenty years, in Zanzibar, he has rendered most important services to the various Expeditions despatched by English and Foreign Governments and by private bodies for the exploration of Central Africa, directing their routes, superintending their equipments, and encouraging them in the formation and transmission of Zoological, Botanical, and Ethnological Collections.

### Oliver Joseph Lodge, D.Sc. (Lond.),

Professor of Physics in University College, Liverpool. Distinguished for his acquaintance with the science of Physics. Author of numerous papers on Physics published in the *Philosophical Magazine*, Proceedings of the Physical Society of London, Reports of the British Association, and elsewhere, including (among many others) the following:—"On some Problems connected with the flow of Electricity in a Plane;" "On a Model illustrating mechanically the passage of Electricity through Metals, Electrolytes, and Dielectrics according to Maxwell's Theory;" "On a Mechanical Illustration of Thermo-electric Phenomena;" "On a Modification of Mance's Method of measuring Battery Resistance;" "On a Method of measuring absolutely the Thermal Conductivity of Crystals;" "An attempt at a Systematic Classification of some of the Forms of Energy;" "On Intermittent Currents and the Theory of the Induction Balance;" "On the Dimensions of a Magnetic Pole in the Electrostatic System of Units;" "On the Phenomena exhibited by Dusty Air in the neighbourhood of strongly Illuminated Bodies" (jointly with the late J. W. Clark); "On the seat of Electromotive Force in the Galvanic Circuit;" "On the Identity of Energy;" "On Electrolysis;" author of a book on "The Elements of Mechanics" (W. and R. Chambers).

### Prof. John Milne,

F.G.S., Associate and Hon. Fellow of King's Coll. Lond. Royal Exhibitioner at Royal School of Mines, Lond. Professor of Mining and Geology in the Imperial College of Engineering, Department of Public Works, Japan. Studied in Freiberg; travelled in Iceland; engaged, in 1873–74, in mining in Newfoundland; accompanied Dr. Beke as geologist to North-West Arabia; travelled across Russia, Siberia, Mongolia, and China to Japan; visited the Kurile Islands, the Corean frontier, California, &c. Author of "Travelling Notes" (*Geol. Mag.*, 1877, pp. 237, 289, 389, 459, 511, 557; 1878, pp. 29, 62); "The Volcana of Oshima" (*op. cit.*, 1877, p. 193); "On the Form of Volcanoes" (*op. cit.*, 1878, p. 337, pl. IX.; and 1879, p. 506); "The Volcanoes of the Kurile Islands" (*op. cit.*, 1879, p. 337, pl. IX.); "On the Cooling of the Earth" (*op. cit.*, 1880, p. 99); "Physical Features and Mineralogy of Newfoundland" (Quart. Journ. Geol. Soc., 1874, vol. xxx., p. 722); "Geological Notes on the Sinaitic Peninsula and N.W. Arabia (*ibid.*, vol. xxxi., pp. 1-28); "Seismic Science in Japan" (Trans. Seismol. Soc., Yedo, vol. i., pp. 1–34); "The Earthquake of February 22, 1880" (*op. cit.*, vol. i., part ii., pp. 1–116); "The Earthquakes of Yedo Plain" (*ibid.*, vol. ii., pp. 1–38); "The Peruvian Earthquake of May 9, 1877" (*ibid.*, vol. ii., pp. 51–96); "Experiments in Seismology" (*ibid.*, vol. iii., pp. 12–64); "Notes on the Great Earthquakes of Japan" (*ibid.*, vol. iii., pp. 65–102); "The Earthquake of March 8, 1881" (*ibid.*, pp. 127–136); "Distribution of Seismic Activity in Japan" (vol. iv., pp. 1–30); "The Systematic Observation of Earthquakes" (*ibid.*, vol. iv., pp. 87–117; joint papers with Mr. T. Gray, B.Sc., F.R.S.E.); "On Seismic Experiments" (Phil. Trans., 1882, and Proc. Roy. Soc., 1881); "Earthquake Observations in Japan" (*Phil. Mag.*, November 1881); "Elasticity and Strength, Constants of Certain Rocks" (1882); "Reports on Investigation of the Earthquake Phenomena of Japan" (Brit. Assoc. Rep., 1881 and 1882). Intrusted with three grants from British Association for the investigation of earthquake phenomena. Author of numerous other papers on geology, mineralogy, mining, &c. Has specially devoted himself to the study of earth-movements.

### Rev. Octavius Pickard-Cambridge, M.A.,

Rector of Bloxworth, Dorset. Distinguished for his acquaintance with Zoology, particularly Arachnology. Has published the following works:—"A History of British Spiders to 1881," entitled "Spiders of Dorset," with Preface and General Introduction in two vols., pp. 1-625, plates 1-6; numerous papers in the Proc. Zool. Soc. of London, especially "On the Spiders of Palestine and Egypt from 1869 to 1883;" article "Arachnida" in "Encyclop. Brit.," 1874; articles "Arachnida" in "Zoological Record," 1870-1883; numerous papers "On Arachnida of various Countries" in *Ann. Mag. Nat. Hist.*, 1860-83; articles "On British Spiders" in Trans. Linn. Soc., 1868-70; articles "On British and Exotic Spiders" in Proc. Linn. Soc., vols. x. and xi.

### George James Snelus,

A.R.S.M., F.C.S., Memb. I.M.E. Metallurgist. Is distinguished as a chemist and metallurgical engineer. He was the first to make pure steel from phosphoric pig iron in a Bessemer converter lined with basic materials, a discovery of national importance, for which he was, in 1883, awarded the Bessemer Gold Medal of the Iron and Steel Institute. He has developed points of much scientific interest in connexion with the mode of existence of carbon and silicon in iron and steel, and has specially studied the liquidation of fluid bodies during the solidification of steel. He has also conducted important researches on the relation between the chemical composition and mechanical properties of steel used for rails. Is the author of the following papers :—"On the Condition of Carbon and Silicon in Iron and Steel"; "On the Composition of the Gases evolved from the Bessemer Converter"; "On the Scientific Features of the Danks' Puddling Furnace"; "On the Manufacture and Use of Spiegeleisen"; "On Fire-Clay and other Refractory Materials"; "On the Direct Process of Steel Making"; "On the Removal of Phosphorus and Sulphur in the Bessemer Process"; "On the Distribution of Elements in Steel Ingots"; "On the Chemical Composition and Testing of Steel Rails."

### Thomas Lord Walsingham.

Trustee of the British Museum. A practical Entomologist and ardent student and collector of the Microlepidoptera, of which he has an extensive private collection. In 1872, Lord Walsingham made a special expedition to Northern California and Oregon, and besides forming a large series of the Microlepidoptera of that district, many of which were unknown, obtained a good collection of other Natural History specimens, which he presented to the Cambridge Museum.—[Addendum.—Author of "Catalogue of North American Tortricidæ in the British Museum," 4to., being Part 4 of "Illustrations of Typical Specimens of Lepidoptera Heterocera," 1879, and published by the Trustees. "On some Probable Causes of a Tendency to Melanic Variation in Lepidoptera of High Latitudes" (Presidential Address, Trans. Yorksh. Nat. Union, 1885); and various papers in the Trans. Ent. Soc. and Proc. Zool. Soc., 1880–84.]

### William Whitaker, B.A. (Lond.),

F.G.S. Assoc. Inst. C.E. District Surveyor on the Geological Survey of England and Wales. Contributor to, or author of, ten of the Memoirs of the Geological Survey, among these being—"The Geology of the London Basin;" "The Geology of the N.W. part of Essex, and the Geology of the country round Ipswich;" of Papers in the Quarterly Journal of the Geological Society on the "Western end of the London Basin;" "The Lower Tertiaries of Kent;" "On some Borings in Kent, and other subjects;" and of many other papers on geology, more especially of the Cretaceous and Tertiary Beds, and on the subject of water-supply. Has also drawn up many lists valuable to the student of geological literature, and was for several years Editor of the *Geological Record*. Awarded the Murchison Medal of the Geological Society, 1886.

## *THE PARIS ASTRONOMICAL CONGRESS.*

WE have now received a considerable instalment of the *procès-verbaux* of the sittings of the Conference, and although those of the final meeting are not yet to hand, we think it important to give, in continuation of our article in a recent number, an account of the work done, so far as the information has reached us, the Conference having sat every day, except Sunday, from the 16th to the 25th.

The meetings, which took place in the large hall of the Paris Observatory, were attended by the following astronomers and physicists, the names being given alphabetically :—Auwers, Berlin; Baillaud, Toulouse; Bakhuyzen, Leyden; Bertrand, Paris; Beuf, La Plata; Bouquet de la Grye, Paris; Brunner, Paris; Christie, Greenwich; Cloué, Paris; Common, Ealing; Cornu, Paris; Cruls, Brazil; Donner, Helsingfors; Dunér, Lund; Eder, Vienna; Elkin, America; Faye, Paris; Fizeau, Paris; Folie, Brussels; Gautier, Geneva; Gill, Cape of Good Hope; Gyldén, Stockholm; Hasselberg, Pulkova; Henry (Brothers), Paris; Janssen, Meudon; Kapteyn, Gröningen; Knobel, London; Krueger, Kiel; Laussedat, Paris; Liard, Paris; Lœwy, Paris; Lohse, Potsdam; Mouchez, Paris; Oom, Lisbon; Oudemans, Utrecht; Pechüle, Copenhagen; Perrier, Paris; Perry, Stonyhurst; Peters, Clinton; Pujazon, Cadiz; Rayet, Bordeaux; Roberts, Liverpool; Russel, Sydney; Schönfeld, Bonn; Steinheil, Munich; Struve, Pulkova; Tacchini, Rome; Tennant, Ealing; Thiele, Copenhagen; Tisserand, Paris; Trépied, Algiers; Vogel, Potsdam; Weiss, Vienna; Winterhalter, Washington; Wolf, Paris. With a few exceptions we have in this list all the men engaged in astronomical photography.

In our former article we gave an account of the first general meeting, held on April 16. The second took place on the 19th. The names of those present were as follow :—

President, M. Struve; Vice-President, Mr. Christie; Messrs. Auwers, Baillaud, Bakhuyzen, Beuf, Bigourdan, Bouquet de la Grye, Common, Cornu, Cruls, Donner, Dunér, Eder, Elkin, Fizeau, Gautier, Gill, Gyldén, Hasselberg, Paul Henry, Prosper Henry, Janssen, Kapteyn, Knobel, Krueger, Lœwy, Lohse, Mouchez, Oom, Oudemans, Pechüle, Perry, Peters, Pujazon, Rayet, Roberts, Russell, Schönfeld, Steinheil, Tacchini, Thiele, Tisserand, Trépied, Vogel, Weiss, Winterhalter, and Wolf.

M. Struve commenced the proceedings by giving an account of the resolutions adopted by a small technical Committee, which resolutions had been prepared by M. Lœwy. They had been suggested by the desire that a great number of Observatories should participate in the work; that the price of the instruments should be moderate; and that the work should be completed in the smallest time possible compatible with thoroughness.

The following conclusions of the Committee were adopted without discussion, and agreed to unanimously :—

(1) The instruments employed shall be exclusively refractors, and may be made locally provided the conditions laid down by the Conference are fulfilled.

(2) The stars shall be photographed as far as the fourteenth magnitude inclusively; this magnitude being indicated provisionally by the scale actually in use in France, and with the reservation that the photographic value shall be definitely fixed afterwards.

The third conclusion gave rise to a considerable amount of discussion, and was finally approved as follows :—

(3) The aperture of the object-glasses shall be 0·33 metre, and the focal length about 3·43 metres, so that a minute of arc shall be represented approximately by 0·001 metre.

The division of the Congress into sections for the study of special questions was next considered, and it was determined that there should be two sections, one to deal with purely astronomical questions, and the other with those involving photography.

It was arranged that these sections should not meet at the same time, and that each section should appoint its officers at the first meeting.

We next come to the work of the Photographic Section, which held two meetings on April 20 and 21.

M. Auwers, the Vice-President of the Conference, took the chair, and proposed that M. Janssen should be appointed President. This proposition was adopted with acclamation. The bureau of this section was composed as follows :—

President, M. Janssen; Secretaries, MM. Dunér and Trépied; and MM. Auwers, Bakhuyzen, Christie, Cloué, Common, Cornu, Cruls, Eder, Fizeau, P. Gautier, Gill, Hasselberg, Paul Henry, Prosper Henry, Kapteyn, Knobel, Krueger, Laussedat, Lœwy, Mouchez, Oudemans, Pechüle,